

WHAT IS CLAIMED IS:

1. An occupant protection device comprising a knee-protecting airbag device located in front of an occupant seated in front passenger's seat for protecting the occupant's knees upon collision of the vehicle, and a container box located above the knee-protecting airbag device for housing goods,

the knee-protecting airbag device comprising an airbag inflatable for protecting the occupant's knees, an inflator for supplying inflation gas to the airbag, a case for housing the folded airbag and the inflator, the case being opened rearward, and an airbag cover for covering the opening of the case, the airbag cover being attached to the case and openable upon inflation of the airbag,

the container box comprising a box body opened rearward and a lid for openably covering the opening of the box body,

before being mounted on the vehicle, the case of the knee-protecting airbag device having the airbag and the inflator housed therein and the box body of the container box are assembled into a mounting module in advance,

whereby, by mounting the module on the vehicle, the knee-protecting airbag device and the container box are mounted on the vehicle.

2. The occupant protection device according to Claim 1,

wherein the airbag cover and the lid are also assembled into the mounting module.

3. The occupant protection device according to Claim 1, wherein the box body is supported at lower surface thereof by a support section formed in the case.

4. The occupant protection device according to Claim 1, wherein:

the case comprises a joint section to be joined with vehicle body; and

the box body is secured to the vehicle body by being joined to the case.

5. The occupant protection device according to Claim 2, the device further comprising an airbag device for front passenger's seat having an airbag for protecting upper body of the occupant, the airbag device for front passenger's seat being assembled into the mounting module.

6. The occupant protection device according to Claim 2, the device further comprising an interior decoration member located in front of front passenger's seat, the decoration member being assembled into the mounting module.

7. The occupant protection device according to Claim 2, wherein the box body and the airbag cover are formed of an integral molded part of synthetic resin.

8. The occupant protection device according to Claim 7, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer protruded outward for attachment to the airbag cover; the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the box body and the airbag cover is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, and the joint wall portion of the airbag cover are soft section made from the soft material, and remaining portions are hard section made from the hard

material.

9. An occupant protection device comprising a knee-protecting airbag device located in front of an occupant seated in front passenger's seat for protecting the occupant's knees upon collision of the vehicle, and a container box located above the knee-protecting airbag device for housing goods,

the knee-protecting airbag device comprising an airbag inflatable for protecting the occupant's knees, an inflator for supplying inflation gas to the airbag, a case for housing the folded airbag and the inflator, the case being opened rearward, and an airbag cover for covering the opening of the case, the airbag cover being attached to the case and openable upon inflation of the airbag,

the container box comprising a box body opened rearward and a lid for openably covering the opening of the box body, and

the box body and the airbag cover being formed of an integral molded part of synthetic resin.

10. The occupant protection device according to Claim 9, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer

protruded outward for attachment to the airbag cover; the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the box body and the airbag cover is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, and the joint wall portion of the airbag cover are soft section made from the soft material, and remaining portions are hard section made from the hard material.

11. The occupant protection device according to Claim 9, wherein the lid is swingably supported by a pivot section formed in the case of the knee-protecting airbag device for opening and closing the box body opening.

12. The occupant protection device according to Claim 2, wherein the airbag cover and the lid are formed of an integral

molded part.

13. The occupant protection device according to Claim 12, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer protruded outward for attachment to the airbag cover; the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the airbag cover and the lid is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, the joint wall portion of the airbag cover and a portion in the vicinity of border of upper edge of the airbag cover and lower edge of the lid are soft section made from the soft material, and remaining portions are hard section made from the hard material.

14. An occupant protection device comprising a knee-protecting airbag device located in front of an occupant seated in front passenger's seat for protecting the occupant's knees upon collision of the vehicle, and a container box located above the knee-protecting airbag device for housing goods,

the knee-protecting airbag device comprising an airbag inflatable for protecting the occupant's knees, an inflator for supplying inflation gas to the airbag, a case for housing the folded airbag and the inflator, the case being opened rearward, and an airbag cover for covering the opening of the case, the airbag cover being openable upon inflation of the airbag,

the container box comprising a box body opened rearward and a lid for openably covering the opening of the box body, and

the airbag cover and the lid being formed of an integral molded part.

15. The occupant protection device according to Claim 14, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer protruded outward for attachment to the airbag cover;

the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the airbag cover and the lid is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, the joint wall portion of the airbag cover and a portion in the vicinity of border of upper edge of the airbag cover and lower edge of the lid are soft section made from the soft material, and remaining portions are hard section made from the hard material.

16. The occupant protection device according to Claim 1, the device further comprising an interior decoration member located around rear side face of the container box, and

a portion of the decoration member immediately around the container box and the airbag cover are formed of an integral molded part.



17. The occupant protection device according to Claim 16, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer protruded outward for attachment to the airbag cover; the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the portion of the decoration member around the container box and the airbag cover is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, and the joint wall portion of the airbag cover are soft section made from the soft material, and remaining portions are hard section made from the hard material.

18. An occupant protection device comprising a

knee-protecting airbag device located in front of an occupant seated in front passenger's seat for protecting the occupant's knees upon collision of the vehicle, a container box located above the knee-protecting airbag device for housing goods, and an interior decoration member located around rear side face of the container box,

the knee-protecting airbag device comprising an airbag inflatable for protecting the occupant's knees, an inflator for supplying inflation gas to the airbag, a case for housing the folded airbag and the inflator, the case being opened rearward, and an airbag cover for covering the opening of the case, the airbag cover being openable upon inflation of the airbag,

the container box comprising a box body opened rearward and a lid for openably covering the opening of the box body, and

a portion of the interior decoration member around the container box and the airbag cover being formed of an integral molded part.

19. The occupant protection device according to Claim 18, wherein:

the case comprises a circumferential wall portion located around the case opening for covering the folded airbag; the circumferential wall portion comprises a retainer

protruded outward for attachment to the airbag cover; the airbag cover comprises: a door openable when pushed by the inflating airbag; a thinned breakable portion located in periphery of the door and breakable when pushed by the airbag to help open the door; a hinge line located in periphery of the door, and bended upon opening of the door; and a joint wall portion to be attached to the case circumferential wall portion by having the case retainer inserted therein and thus being held by the case retainer; and

the molded part integrating the portion of the decoration member around the container box and the airbag cover is a two-color part of soft material and hard material each of which is compatible to each other, and at least the doors, the hinge line, and the joint wall portion of the airbag cover are soft section made from the soft material, and remaining portions are hard section made from the hard material.

20. The occupant protection device according to Claim 19, wherein the lid of the container box is assembled with the molded part to form a panel module, and the lid is mounted on the vehicle by attaching the panel module to the vehicle.